known have had this result. Ten cases which were attacked between the ages of five and fourteen years, have been watched by the author. All have now been married some years, and all are childless. In the treatment of peritonitis in childhood, if the ordinary measures fail to reduce the quantity of fluid, Dr. Kersch employs puncture; if the fluid do not escape readily, he keeps the wound open for some days, or, should this heal prematurely, he makes a second puncture through the scar of the first one.

Two cases are appended. One of these, a girl, aged five and a half years, had been much neglected, and when seen was in a condition bordering on collapse. The ordinary means were tried for a short time, but without effect. Puncture was then resorted to, and was performed in all three times. At the end of two months the child was quite strong and healthy. The other patient, a girl, at fourteen, recovered without puncture. She was treated with large doses of quinine, morphia in weak solution, and cold compresses to the abdomen. She is now twenty-four years old, and has been married six years, but has no children. The author believes the barrenness to be due to the contraction of a layer of lymph which has been deposited upon the ovaries, and the consequent interference with the nutrition of these organs.—*London Med. Record*, Oct. 16, 1876.

SURGICAL PATHOLOGY AND THERAPEUTICS. AND OPERATIVE SURGERY.

33. *The Open Treatment of Wounds.*—Dr. Burow, of Königsberg, reports (*Archiv f. Klin. Chirurg.*, xx. 1, 1876) the results of 123 operations performed by his father and himself during a period of nineteen years, and treated by the open method. The following are the figures given. There were 123 cases, with nine deaths, *i. e.*, 7⅓ per cent., comprising thirty-three amputations of the thigh with six deaths, or 18 per cent.; twenty-four amputations of the leg with three deaths, or 12 per cent.; and twenty-five amputations of the arm, twenty-nine of the forearm, nine of the foot, and two of the hand without any fatal case These figures furnish a most interesting comparison with those compiled by Paul, Malgaigne, Ashhurst, and others, more especially Krönlein, Volkmann, and Thiersch. Dr. B. supports with sound arguments the character of his statistics, while acknowledging that the figures are small. He gives, in brief, the following as the essentials of the system he follows. In a case of amputation of the breast, he carefully checks the bleeding by the use of silk ligatures, which he cuts off short. The wound is then left absolutely open, being protected from dust and flies by a simple oiled cloth. No sutures or plasters are used. When the first oiled cloth is loosened by suppuration, a second is applied dressed with a simple ointment. When granulations spring up luxuriantly, the cloth is wet with a solution of acetate of alumina. This is the whole treatment. After amputations of limbs, he first ligates the larger vessels before loosening the Esmarch's tube, completing the ligations after removing it. The wound is then left open for half an hour, with the double object of guarding against secondary hemorrhage and of allowing the surface of the wound to ooze with a serous fluid. Then he puts in three sutures, securing them with a loop and not a knot, so as to allow for swelling of the tissues. Two or three strips of plaster are placed between the sutures, and the lower angle of the wound is left wide open for the free escape of discharges. Then by position of the limb and careful watching, it is made sure that the secretions can escape freely. He does a flap operation, insists on the greatest cleanliness on all hands, and never uses sponges a second time.—*Medical Record*, Dec. 16, 1876.

34. *Sulphite of Soda as a Dressing.*—Dr. Minnich, of the Venice Hospital, prefers the employment of the sulphite of soda to carbolic or salicylic acid, not

only as a dressing for wounds, but also in erysipelas. It is much less inconvenient to use, and much cheaper. He applies it in the same way as Prof. Lister does the carbolic acid, and the solution employed consists of one part of the sulphite and one of glycerine to nine parts of water. Its beneficial effects have been proved in a great number of cases.—*Med. Times and Gaz.*, Sept. 23, from *Gaz. des Hôp.*, Sept. 7.

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35. *New Method of Wound-drainage.*—Mr. CHIENE describes (*Ed. Med. Journ.*, September, 1876) a new system of drainage of wounds which consists in the substitution of hanks of catgut prepared in carbolic acid solution for the India-rubber drainage-tubes. The number of threads in each skein must depend on the size and importance of the wound. "In a large wound," he says, "as far as I am at present able to judge, eight or sixteen threads should be sufficient in each skein; the number of the skeins depending on the shape and size of the wound. In cases in which very profuse discharge is expected, either in a specially large wound or after a tedious operation, in which the wounded surface is necessarily exposed for a considerable time to the irritation of the carbolic spray, it will be better to increase the number of separate skeins, stitching them to different parts of the wounded surfaces in order to keep them in position, than to depend on one or two thick skeins. I am led to form this opinion from the result in the case of excision of the knee. If it is ever necessary to use a skein of more than sixteen threads, one thread of catgut prepared in chromic acid should be added to act as a drain, if required, during the absorption and molecular disintegration of the drain. Chromic-acid gut should also be used to stitch the drain in position when such a procedure is necessary.

"As regards the thickness of gut, I have used three thicknesses. The finer the gut the more numerous and the smaller will be the capillary tubes between the threads. The fineness of the gut will not interfere with the capillary action through the threads. For these reasons, I am of opinion that the finest gut should be used; by its use, the better will be the drain for any given thickness of skein.

"It may be a question how much of the action is due to capillarity through and between the threads, and how much to the drain acting as a lead to the discharges. Capillarity has, I believe, the chief place.

"I have hitherto used the gut prepared in the usual way by soaking in carbolic oil. Simple soaking of the drain in carbolic lotion for a quarter of an hour before using will be sufficient in cases in which prepared gut is not at hand.

"As long as the drain is acting, there will be a current of fluid along and around the threads (as well as in them), separating them from the living tissue, by means of which the process of absorption mainly takes place. When the flow ceases, then absorption of the column of fluid will first take place, the living walls of the canal will then reach the threads, and absorption will then commence. If this is a true explanation of what happens, then it is evident that it will not be necessary to use catgut specially prepared (as Mr. Lister, for instance, has shown by chromic acid) in order to delay absorption.

"Further experiment may show that, in many wounds, all that will be necessary will be to bring the catgut ligatures out at the corners of the wound instead of cutting them short. This was my first idea; but I have been so satisfied with the skein, that I have not yet made trial of it.

"I make no allusion in this paper to the use of catgut in draining suppurating wounds, or in wounds not treated antiseptically.

"I beg to recommend, as worthy of the notice of the profession, the principle of drainage by utilizing capillary forces through the skeins of an absorbable material like catgut, if, by its use, the evils of the drainage-tube, already referred to, are got rid of.

"We may now anticipate a time when, with catgut stitches instead of silk, horsehair, or silver wire, catgut drains instead of India-rubber tubing, and chromic-acid gut fixing together the buttons instead of silver wire, it will not be necessary to uncover our wounds from first to last during healing, when the deep dressing need never be shifted, and when the outer dressing will only require to be removed when soaked with discharge. The amount of discharge, in its turn, will be reduced to a minimum by the use of an absorbable animal material like catgut instead of non-absorbable foreign bodies like silk, silver wire, and India-rubber."

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36. *Scalds by Steam.*—Inspector-General SMART gives (*Brit. Med. Journ.*, Sept. 23, and *Lancet* of same date) a very interesting account of the cases of scald which recently occurred on board the Thunderer by an explosion of the steam boiler. Out of thirty-four *vigorous* men who were in the stokeholes, only two remain alive, and, in addition to these, eleven have since perished who were not so near to the exploded boiler. In all about eighty persons were involved, of whom forty-five have perished by an explosion of steam and hot water that burst the boiler with the force of a thirty-five ton gun, scattering huge masses of iron, tons of boiling water and volumes of steam, together with dense fumes from the extinguished fires. After an hour the living, fifty-eight in number, followed by nineteen corpses, reached Haslar Hospital. Of the latter fifteen had been brought up dead from the stokehole, and four had expired in the passage to the shore. Of the living, the majority were very severely scalded, but only one had received mutilation—of an ankle-joint, dying in four hours. Within thirty hours eleven others had succumbed to primary shock. Some of them were semi-comatose and little sensible to pain, others, after attempts to rally, became delirious, rolling heavily from side to side, and suffering from strangury, and stripping the dressings from their flayed limbs; breathing heavily, and vomiting. Those who survived the shock felt relief from scorching agony in thirty-six to forty-eight hours, gaining fitful sleep, passed excretions, and some asking for animal food. Possibly steam-scalding of fauces and of primary air-tubes, in those who died of the so-called shock within thirty hours, was the lesion of most fatal import. The stage of reaction for suppurative effort was attended by internal congestions and inflammatory action in the brain and along the gastro-enteric track, with their characteristic symptoms. Under such conditions six perished on the fifth, sixth, eighth, and ninth days from injury. On the tenth day there remained alive forty-four, of whom twelve have died, twenty-seven have been discharged, and five remain under treatment (September 12th).

One of these last cases, J. D——, was severely scalded by steam over the head, face, and neck, in the air-passages, and over the arms and hands. He had been exposed to the first rush of steam up through the casing of the funnel, and 350 square inches of his surface had been denuded of its cuticle or covered with large vesications. On the sixth day all his unscalded surface was of a lurid red colour. He then became delirious, and had frequent fits of moaning, which lasted till the eleventh day, when he again answered coherently; but from the fifteenth to the twentieth he was again delirous, yet after that he recollected for the first time that he had been on board the *Thunderer*. In the mean time he had severe ophthalmia that had ulcerated both corneæ, the left irrecoverably. On the twenty-second day he complained of dysphagia, when the fauces were found sloughy and aphthous, and at the end of the fourth week gastro-enteritis afflicted him till the thirty-second day. On the fortieth day the kidneys were excreting bile pigment, sp. gr. 1046, which state gave way to deposits of urates, phosphates, and, later, oxalates. He is now convalescent with, however, left staphyloma and a few cicatricial contractions.

In another case that is recovering, the patient was scalded by steam to the extent of 400 square inches. He has had no signs of meningitis, but from the suppurative stage he has had attacks of gastric irritation, and that also of the kidneys, to the extent of excretion of albumen with broken blood-disks.

Such have been the two worst of the cases that have barely evaded the dangers which others have, only less in degree, gone through. In all, the results of nervous shock are well-marked in lowered courage and in dread of the past, from which time alone can restore them.

Sloughing of the deeper integuments has been rare compared with that in gunpowder burns, wherein delirium is of earlier access. On the other hand, early deaths from shock have been more frequent than in those burns, which may be attributed to the greater surface involved causing nervous depression, from which the reparative powers could not rally.

A scientific observer who had been witness of the results in two great magazine explosions remarked to me that 80 square inches of inflamed surface induced fever with danger to life. To test this assertion. I set a painstaking officer, Dr. Burke, to make approximate measurements of the scalded surfaces in twelve cases remaining in the seventh week. He found it. in square inches, to have been 198, 213, 232, 265, 283, 345, 355, 363, 377, 398, 477, and 766, giving an average of 356 square inches excoriated or vesicated. Of these the men now under treatment gave 198, 355, 363, 398, 477. All these had two points in common—the severity of the scald on the face and head, and sloughs, leaving indolent ulcers on the arms, in which the new cuticle was very thin. The lowest, 198 square inches, was in the oldest man injured, aged fifty-three, who had a heavy struggle through the febrile reaction. The figures 355 belonged to the extremely dangerous case of J. D——, already detailed. The highest, 766 square inches, is altogether exceptional, as he could not have survived had the whole of that surface suppurated, much of it drying under the vesications. In him the scald was over nearly one third of his surface. He is one of the two remaining who were in the stokehole, and he escaped into a coal-bunker, from which he was drawn insensible.

The questions of viability as dependent on the extent of surface involved, which determines the degree of shock, and again on the depth of tissue injured as taxing the reparative powers, are worthy of more precise observation. Perhaps in those who did not survive primary shock, the scald of the respiratory track, as well as that of the skin, precluded rallying; while in those who fell later, the depth, more than superficial extent, proved fatal, which may explain also a higher mortality from the sequences in gunpowder explosions than in severe scalds not directly fatal. I would view 350 square inches, the mean of these measurements of scalds, and 250 square inches of surface burnt by gunpowder, as equally fatal injuries.

As to the treatment. Until decided signs of rallying, it was by stimulants, with sago and beef-tea, anodynes of opium and chloral hydrate, chloroform to allay irritation of the stomach, and the use of the catheter. After rallying, beef-tea and animal food, where appropriate, were given night and day. Lime-water with milk was given to allay irritability of the stomach. On and after the third day, laxatives were given when required to relieve constipation, which was a most suspicious sign throughout, as animal food was then well borne, and the healing process went on rapidly. In treating internal complications, general therapeutics were observed. In those of the air passages there were favourable results in the congestive stage, and pneumonia developed only in two cases both fatal. The meningitic symptoms were beyond special treatment and yet two such recovered, and several also in which delirium had been present. Gastro-enteritic symptoms ran high, but subsided more readily than the meningitic with the establishment of suppuration, but there were instances of recurrence at a later stage, in which one died with coffee-ground vomit. The renal disturbance was generally checked by alkalies and nitric ether. Great nervous prostration caused anxiety as leading to syncope, which was the mode of death in more than one instance in the suppurative stage.

The local treatment was by oil and lime-water on cotton-wadding on every part to the fourth and fifth days, and later, in the majority, on the limbs. This being found inconvenient on the face, head, and neck. it was changed for a wash over with carbolic oil (1 to 10), then dusting on it from a common flour-dredger a powder, consisting of one of oxide of zinc, one of magnesia, and two of powdered starch, sifted on wherever moisture appeared, care being taken to keep free the facial orifices. It formed a mask to the features, excluding the atmosphere. Under its protection the process of "scabbing" went on favourably, and, the crusts detaching, the scalds were found healed, except sometimes on the pinna of the ear, where abscesses gave trouble. In one case only is there any permanent deformity by cicatrices on the face, so that I think it applicable also in confluent smallpox. It was used on some sores on the limbs, the forearms and hands with success. Although only a mode of excluding atmospheric air, yet its claim is for simplicity and readiness of application. The treatment by oil and lime-water was in general disused before the tenth day; and when the above was not employed, it was substituted by a liniment of carbolic acid and olive oil (1 to 20) on lint under oil-silk, retained by bands of Lister's gauze, which although locally successful was not found free from a suspicion of irritating the kidneys.

To maintain the highest possible degree of atmospheric purity, almost every known deodorant was used; but preference was given to the process of Dr. Goolden, of disengaging chlorine, insensibly, from a mixture of nitrate of lead and common salt in solution, sprinkled on the floors from watering-pots, and on sheets hung round the offensive beds.

37. *Ranula treated by Injection of Chloride of Zinc.*—Prof. Panas has repeatedly met with marked success from this method of treatment, employing from three or four to seven or eight drops of a solution of from one-tenth to one-fifth in strength. One very remarkable case recently occurred, in which excision, suture, drainage, etc., had in vain been tried, the liquid always reaccumulating; so that at last punctures were only made from time to time in order to ward off dangerous paroxysms of suffocation. Eight or ten drops of the solution (one-tenth) were injected without drawing off the contents of the cyst, and this after a while was repeated with a solution of one-fifth. The cure was very rapid, for in less than five weeks after the commencement of the treatment it was complete. The method is applicable to all kinds of mucous or serous cysts, for which Dr. Panas has made it a general means of treatment since his first case occurred, now two years ago. This was a case of subhyoidean cyst which had resisted cauterization and iodine injections, but yielded to a single injection of the chloride made without removing the contents of the cyst.—*Med. Times and Gaz.*, Sept. 23, from *Rév. Méd.*, Aug. 21.

38. *Gastrotomy for Stricture of Œsophagus.*—The medical journals of Paris (*L'Union Médicale*, Oct. 26; *Gazette Hebdom.*, 27th Oct., and *Le Mouvement Médicale*, 28th Oct.), contain reports of a most interesting case of gastrotomy recently performed by M. Verneuil, and an account of which was communicated by him to the *Academie de Médicine* (Oct. 24). From these we compile the following particulars. Gastrotomy, first performed by M. Sedillot in 1849, has now been practised 16 times without success, but in all these cases the patients were already weakened by anæmia or cachexia. M. V.'s patient was in excellent general health, and consequently a favourable subject for the operation.

The patient was a lad seventeen years of age, who, on the 5th of February, swallowed by accident a solution of caustic potash. He immediately experienced a sensation of intense burning in the throat followed by fever and exfoliation of the mucous membrane of the pharynx and œsophagus. These symptoms abated, but after fifteen days he had great difficulty in swallowing. The dysphagia increased, and on the 31st of March the patient was admitted into La Pitié Hospital under the care of M. Dumontpellier. Attempts at catheterism were repeatedly made without success, and on the 24th of May he was transferred to the service of M. Verneuil. At this time he was much emaciated, his face pale and worn, temperature and pulse below normal. He was unable to swallow anything, all food being returned as soon as taken; death from starvation seemed imminent. Catheterism showed the existence of a very tight stricture, about seven inches from the upper extremity of the gullet, so low as to preclude the idea of œsophagotomy. After some hesitation and repeated failures to introduce instruments through the œsophagus while the patient was under the influence of chloral, M. V., after consultation with M. Leon Labbé, decided to perform gastrotomy. Chloroform was administered, and full antiseptic precautions were taken during the operation, which was performed as follows: An incision was made in the abdominal wall parallel to the margin of the ribs on the left side, about two inches long. The skin, subcutaneous tissue, and the great oblique muscle were then divided, and the peritoneum exposed, which was raised by forceps and opened with scissors. The stomach, which was recognized by its white colour, was drawn into the wound with forceps and two long acupuncture needles were passed perpendicular to the lips of the incision, so as to maintain the parietes of the stomach in contact with the edges of the incision. The margins of the incision into the peritoneum were seized with several hemostatic forceps. The portion of stomach exposed was then carefully stitched to the lips of the wound, in the abdominal walls and peritoneum by fourteen metallic sutures. The two acupuncture needles were then withdrawn and the stomach laid open. The parietes of this viscus, which since the application of the sutures had become intensely congested and of a violet red, was thickened and resembled nothing seen in the cadaver. A large sound of red caoutchouc was next passed into the stomach to the extent of about three inches, and secured by a silver wire, which traversed it and the walls of the organ. There was considerable hemorrhage from the incision in the stomach which was suppressed by the hæmostatic forceps. Afterwards the whole abdomen was covered with collodion and the patient removed to bed. He made a good recovery, and was almost at once able to receive into his stomach liquid food.

The progress of the case was attended by few vicissitudes. The patient was able to get up on August 20th, and by September 10th he could assist the nurses in the wards, having gradually recovered all the strength and energy which he had before the accident. The first sound was exchanged for one of an enormous size, which always remains within the fistular aperture. This fistula is rounded, and bordered throughout its circumference by a small projection, formed of the red and smooth gastric mucous membrane. The patient injects through the sound thickened soups, hashes, *potages*, and drinks, having no other sensations at the time than those of heat and cold, and not finding one thing better than another, although after making the injections he often finds his mouth filled with saliva. He can, however, swallow none of this, and is obliged to expel it by the mouth. This privation of saliva and his peculiar mode of alimentation do not, however, seem to inconvenience the patient, if we may judge by his good state of health, and especially by his increase in weight. A month after the operation, this, which had fallen to thirty-three kilogrammes, rose to thirty-four (75 lbs.), and at the present time it has reached forty-two (92 lbs.). Last Tuesday he was to be present at the Academy, and take one of his meals in their presence. For these he has a very good appetite, and it is a curious circumstance that while they are being introduced into the stomach he executes masticatory movements.

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39. *Treatment of Spasmodic Stricture of the Œsophagus.*—Dr. MORELL MACKENZIE, in an interesting lecture on spasmodic stricture of the œsophagus (*Medical Times and Gazette*, Oct. 21, 1876), makes the following remarks on the treatment:—

Whenever the cause, whether of constitutional or local origin, can be discovered, it should be removed. All reflex sources of irritation—especially those connected with the gastro-intestinal and uterine systems—should be most carefully sought out, and, if possible, got rid of. The nervous system must be braced up by moral, as well as by hygienic and medicinal agencies. It must not be forgotten that the hysterical disposition prevails in by far the largest number of cases. The mind should, if possible, be kept employed by regular and interesting occupation, or by change of scene and travel. Certain nervine tonics are specially valuable, such as the valerianate of zinc. I generally give it in combination with assafœtida, but it acts very well alone.

The dietary in these cases is of the greatest importance. If the spasm is very severe, thickened liquids should be given, and it is well to bear in mind that warm drinks are much less apt to bring on spasm than cold ones, and in nine cases out of ten if the drink is sweetened it is better borne. Many patients discover these circumstances without medical advice. Gradually the food may be thickened, and panada[1] may be allowed. If the case progresses favourably, the patient will be able to return by degrees to ordinary diet. Stimulants should not, as a rule, be allowed, and all *piquant* food should be prohibited. It is the greatest mistake to force these patients to take solid food. They may sometimes be tricked out of their malady when it is slight and recent, but rough measures always fail.

As regards local treatment, much can be done with the continuous current. The electrode should be introduced into the œsophagus at least once a day, and kept in position as long as the patient can bear it. I generally use a ten or twelve-celled battery. The application should be made soon after a meal, so that a considerable time may elapse between the treatment and the next time of deglutition. The muscles should also be galvanized externally. This treatment generally requires to be continued for some weeks or months. Sometimes great benefit, and indeed a complete cure, may be obtained by passing bougies. It is best to use an instrument with a metallic or ivory knob, and, if possible, to keep the extremity of the instrument opposite the seat of spasm. This treatment affords relief in the same way that passing a sound sometimes relieves irritability of the neck of the bladder. I have never obtained any satisfactory results from the application of stimulating or astringent solutions to the œsophageal mucous membrane. It has already been pointed out how easily those cases dependent on flatulent dyspepsia can be cured. It must not, however, be forgotten that in a large number of instances the dysphagia is a mere fancy, there being, in fact, no spasm. By passing a bougie and assuring the patient that there is no obstruction, such persons may sometimes become aware of the groundlessness of their sensations, but they are often more difficult to cure than true spasm.

40. *Supra-pubic Cystotomy performed by Incising the Anterior Parietes of the Bladder on the Calculus.*—M. A. Amussat records (*Le Courier Médical*) an interesting case of this. The subject of it was a boy four and a half years of age, whom he was requested to examine by Dr. Costilhes, under the belief that the patient was suffering from calculus. On the 3d April, 1874, the patient was chloroformed, and a careful examination made, but without detecting any calculus. Subsequently the patient was examined by another surgeon, with the same negative result. The symptoms of calculus continuing, at the request of Dr. C. a second examination was made on the 2d February, 1876, by M. Amussat, when the existence of a large calculus was ascertained. On the 20th of the same month, the patient was thoroughly chloroformed; the bladder sufficiently distended with tepid water, when M. A. made an incision over the linea alba and above the pubes, about five centimetres long; he then made a small opening near the pubis, which he afterwards extended to four centimetres by the use of the hernia bistoury of Dr. Palamidesi. An examination then of the anterior parietes of the bladder by the touch, and an exploration by the rectum of the bas-fond of the bladder failed to detect the stone. M. A. then introduced a child's lithoclast, and by opening it to its greatest extent he was enabled to grasp the stone about a centimetre below the umbilicus. During these manœuvres the abdominal muscles contracted violently, expelling the contents of the bladder and some fecal matter from the rectum. Not wishing to open the abdomen over the calculus, M. A., by careful manipulation, but with difficulty, succeeded in dislodging the stone and drawing it down opposite to the anterior parietes of the bladder and beneath the incision. He then confided the lithoclast to an assistant to hold it in position while Dr. Costilhes, pressing on the abdomen with his hand above the calculus, kept it steady. M. A. then placed his forefinger on the anterior of the organ in contact with the lower portion of the stone, and with his nail as a guide he made an incision

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[1] Panada is generally made of chicken or some white meat, but mutton and beef may be employed. The essence of the meat should first be extracted, and the residue reduced to the finest pulp. The whole should then be mixed together, and passed through a fine sieve. It should then be heated, and in the case of invalids should be served with fresh gravy.

into the bladder, without implicating the peritoneum, of more than two centimetres in extent, which allowed him to touch directly the calculus with his finger. Taking, then, the lithoclast in his right hand, his finger continuing to be applied to the calculus, he drew down the latter, and thus penetrated into the bladder. The instrument was then withdrawn, and an attempt made to seize the lower end of the calculus, but owing to the violent contractions of the bladder did not succeed in extracting it until after persevering efforts, and after seizing the end of the stone with small forceps, and with the aid of the bent forefinger.

The operation finished, it became important to secure a passage for the urine through an elastic catheter introduced through the wound. But M. A. had been compelled, in order to extract the calculus, to withdraw his left forefinger, and to seek anew for the opening in the bladder would incur the risk of injuring the parts, and might result in effusion of urine and abscess. After reflection, M. A. adopted the following plan: He introduced through the urethra a small metallic sound, much curved, and passed its beak out through the abdominal opening; he then slid a gum catheter opened at both ends over the sound as far as the bladder, and the metallic sound was then withdrawn. The edges of the wound were united by four twisted sutures; the catheter was fixed by a thread to the nearest pin, and its free extremity inserted into a glass bottle, and the patient put to bed.

This long and difficult operation, in which 100 grammes of chloroform was given, was followed for two days by prostration and loss of appetite, but the traumatic fever was not very high.

On the 25th February (fifth day) the pulse was 120, the appetite returned, and a substantial diet allowed. The sound having been removed on the evening of the fourth day, the urine flowed freely from the wound. The progress of cure, with the exception of some redness about the sutures and ulceration around the needles, progressed favourably. On the 9th March the urine began to flow from the urethra. On the 24th March the wound had completely cicatrized, and the urine flowed entirely by the urethra. By the 14th of April the patient was perfectly cured.

Fig. 1.

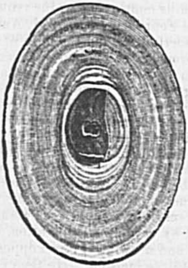
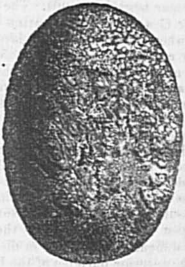


Fig. 2.



The accompanying figures (for the opportunity of laying which before our readers we are indebted to the courtesy of M. Amussat) represent the size, form, and external appearance of the calculus, and the appearance also of a section. The calculus was very hard, weighed 45 grammes, was 2½ centimetres thick, and was composed of urate of ammonia.

M. A. thinks that the calculus was developed in the urachus, and had become fixed there, and he refers to a case operated on by Franco (*Traité très Amplé des Hernia*, 1561, p. 139), which he thinks was of the same character.

M. Amussat also relates two other cases of urinary calculi in old men, in which he performed the supra-pubic operation, incising the bladder on the calculus, and finally refers to some cases of supra-pubic cystotomy, in which his father had operated in a similar manner.

41. *Effects of the entry of Air into the Veins.*—M. **Couty**, of Val de Grace, discusses in succession the various theories that have been proposed—cerebral, cardiac, and pulmonary—to account for the phenomena observed, and shows that none of them are quite satisfactory. He has made numerous experiments on dogs under various conditions—healthy, curarized, uninjured, and with the chest laid open, so that the movements of the heart might be examined and tracings taken. The results at which he has arrived are that air in the veins proves fatal through the circulatory system; it first diminishes and then suppresses the aortic wave and the arterial tension. Death is preceded by four periods, the rapidity of succession of which varies. First period: The arterial tension diminishes some centimetres, but this diminution is compatible with the exercise of the greater functions. Second period: The tension falls from four to eight centimetres, and disturbances arise from cerebral anæmia, acceleration of the respiratory movements, then further fall, loss of consciousness, etc. Third period: The arterial tension sinks almost to zero; symptoms of medullo-bulbar anæmia appear, with contractions of the striated muscles, involuntary evacuations, and diminution in the frequency of the respiration. Fourth period: Complete arrest of the circulation; the nerve centres die, the respiration ceases, and the right and left heart, the contractions of which are accelerated and energetic for the first three periods, are soon after arrested. But the arrest of the circulation may be very incomplete, and the disturbance from the entrace of air transitory, and then the general disturbances may be slight, or not perceptible, or they may only extend to the second or third period. But how does air in the veins arrest the circulation? M. Couty replies, by distending the right cavities of the heart. In them it accumulates and gradually produces asystolia, rendering the contraction of the right heart incomplete, and occasioning insufficiency of the tricuspid valve. The dilatation of the right side is so great as to double or treble the size of the cavity. The venous pulse is very strongly marked, even as far as to the crural vein, and air is projected throughout the venous system, appearing in the sinuses of the dura mater. Lastly, the heart contracts on an elastic fluid, and compresses instead of propelling it, M. Couty's view, therefore, is, shortly, distension, consequent on which is asystolia, and, finally, diminution or suppression of the pulmonary wave.—*Lancet*, Sept. 30, 1876.

42. *A Form of Chronic Inflammation of Bones* (*Osteitis Deformans*).—Sir **James Paget** communicated to the Royal Medical and Chirurgical Society (Nov. 14), a paper on this subject. He first gives a detailed account of a case which had been for many years under his observation, briefly noticed two other cases he had seen and referred to one recorded by Dr. Wilks in the *Path. Trans.*, vol. xx. and of another under the care of Mr. Bryant in Guy's Hospital.

Sir James Paget stated he had been unable to find recorded cases precisely similar to these, and he considered the following to be the chief characters of the affection: It begins in middle age or later, is very slow in progress, may continue for many years without influence on general health, and give no other troubles than those which are due to the changes of shape, size, and the direction of the diseased bones. Even when the skull is largely thickened, and all its bones exceedingly altered in structure, the mind remains unaffected. The disease affects most frequently the long bones of the lower extremities and the skull, and is usually symmetrical. The bones enlarge and soften, and those bearing weight yield and become unnaturally curved and misshapen, suggesting the proposed name, "osteitis deformans." The spine, whether by yielding to the weight of the overgrown skull, or by changes in its own structure, may sink and seem to shorten, with greatly increased dorsal and lumbar curves; the pelvis may become wide, the necks of the femora may become nearly horizontal, but the limbs, however misshapen, remain strong and fit to support the trunk. In its earlier periods, and sometimes through all its course, the disease is attended with pains in the affected bones,—pains widely various in severity, and variously described as rheumatic, gouty, or neuralgic, not especially nocturnal or periodical. It is not attended with fever. No characteristic conditions of urine or of feces have been found in it. It is not associated with any constitutional disease, unless it be cancer, of which three out of the five cases recorded in the paper were the subjects. The bones examined after death show the consequences of an inflammation affecting, in the skull, the whole thickness, in the long bones chiefly the compact structure of their walls, and not only the walls of their shafts, but, in a very characteristic manner, those of their articular surfaces. The changes of structure produced in the earliest periods of the disease have not yet been observed, but it may be believed that they are inflammatory, for the softening is associated with enlargement, with excessive production of imperfectly developed structure, and with increased blood-supply. Whether inflammation in any degree continues to the last, or whether, after many years of progress, any reparative changes ensue, after the manner of a so-called consecutive hardening, is uncertain. The microscopic characters bear out this view of the nature of the process, and Mr. Butlin, in his report, discussing whether it might be of the nature of new growth, hypertrophy, or chronic inflammation, decides in favour of the latter. The paper goes on to point out the diagnosis from various forms of hyperostosis and osteo-porosis, some of which are dependent upon simple inflammation of bone, others upon strumous, gouty, syphilitic, and other specific inflammatory processes. In such cases it is rare to get the whole length of the bone affected, but the distinction between them and "osteitis deformans" is most evident in the clinical history, and the absolute retention of good general health in the latter. The only parallel in this latter respect is with chronic rheumatic arthritis, which, however, is perfectly distinct, and is never associated with osteitis deformans. Rachitis and osteo-malacia have scarcely a feature in common with osteitis deformans. In rachitis the bones are too short, too small, and have different curves to the elongated and thickened bones of this disease; and in osteomalacia they are thin and bent in an angular manner. In conclusion, the paper indicated the variety of diseases which have given rise to different examples of the great porous skulls found in museums, mostly without any life history. Some of them are examples doubtless of—(1) osteitis deformans; others (2) of osteo-malacia, as in cases described by Durham and Solly, which are distinguished by their softness and lightness in proportion to their size; (3) of rachitic, where the skull is very light and friable, with a fine felt-like surface; similar skulls from young lions and tigers are to be found in the Museum of the Royal College of Surgeons; (4) from disease is early life, in which both cranial and facial bones become largely thickened, porous, or reticulated, and the cranial cavity diminished; to this group belongs the "leontiasis ossea" of Virchow; lastly (5) enormous, bossed, and nodular outgrowths from the skull, as in the specimen described by Dr. Murchison and Messrs. Hulke and De Morgan in the Pathological Society's Transactions, vol. xvii.—*Lancet*, Nov. 18, 1876.

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43. *Trephining.*—M. SÉDILLOT, at a late meeting of the Academy of Sciences in Paris, communicated a paper on preventive trephining in fractures with displacement of splinters of the internal or vitreous table of the cranium. The author, in his former communications (*Comptes Rendus* of Oct. 12 and Nov. 16, 1874, tome lxxix.) on the fractures of the internal or vitreous table of the cranium with displacement of splinters, had demonstrated that trephining is the only method of preventing inevitable and nearly always mortal complications. The present paper contained one hundred and six confirmatory cases, partly derived from the publications of MM. Chauvel, Gross, Cochu, T. and J. Boeckel, and Schalck, and several from M. Sédillot's own experience. Out of the one hundred and six wounded, seventy-seven were trephined; twenty-nine were not operated on; nine trephinings were preventive—that is to say, they were performed before the appearance of primitive or consecutive accidents. After the first day sixty-eight curative operations were done with the object of remedying grave complications, such as paralysis, loss of consciousness,

convulsions, coma. Amongst these twenty-one operations were performed in the first five days of the wound, and forty-seven were delayed until after that time. Out of a hundred wounded patients the external table of the cranium was found unfractured in twenty-one cases; and as the majority of the patients at first showed few symptoms, their wounds were frequently thought to be but slight. Out of the twenty-nine wounded suffering from vitreous fractures with splinters not trephined, there were one cure and twenty-eight deaths; out of the seventy-seven trephined, twenty-nine cures, eighteen deaths. Nine preventive trephinings gave six cures and three deaths; sixty-eight curative trephinings gave twenty-four cures, forty-four deaths; twenty-one early trephinings, eight cures, thirteen deaths; forty-seven retarded operations, fifteen cures, thirty-two deaths. These results, according to the operator, were the confirmation of the facts and precepts laid down in his preceding communications. The mortality was in proportion to the delay in the application of the trephine; two-thirds of the patients were saved by preventive trephining; more than a third by early trephining; less than a third by retarded trephining, and only one in twenty-nine in the cases where recourse was not had to trephining. M. Sédillot reminded his audience that he had proposed, in cases of doubt or hesitation as to the existence of a vitreous fracture, to have recourse to explorative trephining which Dr. Gross, of the Faculty of Medicine of Nancy, had performed under very bad conditions of general health. This operation was performed for the first time, and will certainly be again attempted. The patient, it is true, died, but death must not be attributed to the laying bare of the diploë. The suppurated state of the dura mater showed that it had received an indirect contusion, and the uncovering of the diploë does not usually bring on accidents, as we see in superficial excisions of the cranium by sabre-wounds. Surgical removal of a body fragment of the fractured external table does not cause contusion of the diploë, divided and laid bare, in all the applications of the trephine. Therefore it is allowable to renew this attempt. M. Sédillot also analyzed ten cases of trephining to demonstrate the fact that complication of vitreous fractures, the time elapsed after the wound, the circumstances under which the wounded are placed, and their degree of vitality, have a great influence on the condition of the patients who succumb quickly to, or resist in a surprising manner, nearly identical lesions.—*London Med. Record*, Nov. 15, 1875.

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44. *Fracture of the Cranium with Depression; symptoms of compression; cure without trepanning.*—M. Berger communicated to the Surgical Society of Paris, Oct. 11, 1876, an interesting case of this. The subject of it was a child aged thirteen years, who was struck on the right parietal region by a heavy bolt, which had fallen from a great height, causing a contused wound of the scalp and a rather extensive depression. The patient fell senseless; reviving afterwards he was sent to the hospital, where he had successively two attacks of violent general convulsions, terminating in coma with contraction of the upper limbs and squinting. These symptoms disappearing spontaneously, M. B. concluded not to resort to trepanning. By the end of the second day all the cerebral symptoms disappeared and did not recur. The wound and the extensive denudation which at first existed were covered with granulations, and the patient recovered.

M. Berger called attention to the less grave prognosis in traumatic lesions of the cranium in young subjects. He attributed the convulsions in the above case to the irritation of the surface of the parietal convolutions by the fragments of the depressed bone.

In reference to surgical interference where there is an absence of cerebral symptoms menancing life, M. B. thinks that expectation is indicated by recent statistics, especially those of Dr. Bluhm of 925 cases of trepanning. This operation resulted the more favourably the longer time had elapsed after the injury. Thus primary trepanning in fractures of the cranium with depression resulted in a mortality of 57.14 per cent.; secondary trepanning in a mortality of 40 per cent., and later trepanning in 16.67 per cent. only. It is, therefore, he says, advantageous to postpone as long as possible surgical interference, and to wait until the most positive indications present themselves before elevating the fragments.—*Gazette Hebdom.*, Oct. 20, 1876.

45. *Injuries to the Shoulder.*—Dr. M. Schüller, of Griefswald, in a contribution to the *Berliner Klinische Wochenscrift*, No. 37, 1876, on a simple guide to the differential diagnosis between fracture of the neck of the humerus and subcoracoid dislocation, alludes in the first place to the difficulty occasionally experienced by surgeons in distinguishing the one injury from the other, especially in fracture near the upper end of the humerus, in which the lower fragment, the shaft of the bone, is displaced inwards and into the axilla, whilst the upper fragment, the head of the bone, remains in the glenoid cavity. In this form of injury, which usually consists in fracture of the surgical neck of the humerus, the long axis of the arm runs obliquely inwards towards the coracoid process, the elbow stands away from the side of the trunk, and the deltoid muscle is flattened or even concave on its outer surface—all signs of forward dislocation of the head of the bone. In many instances a fracture may be readily diagnosed, partly through crepitation, partly from a determination of the characteristic form of the end of the lower fragment, and of the presence of the upper fragment just below the acromion. Occasionally, however, a precise diagnosis of this injury may be rendered impossible through much effusion of blood, absence of crepitation, and the small dimensions of the upper fragment. Attempts at reduction performed again and again are in such a case always followed by an immediate return of the abnormal condition of the shoulder. Sometimes it happens that in one of these attempts at reduction the surgeon is able to make out crepitus, and then assumes that he has himself produced the fracture through the application of too much force. The author holds that under ordinary conditions it is impossible to produce fracture of the neck of the humerus in an attempt to reduce a dislocation at the shoulder. It often happens, however, that in a case of old fracture of the neck of the humerus, mistaken for and treated as a case of subcoracoid dislocation, the fragments are again separated in an attempt at reduction. The author does not altogether disapprove of the administration of chloroform in cases of doubt, but holds that apart from the fact that there may be cases in which the doubt cannot thus be cleared up, it would be more desirable to have some means of making the diagnosis surely and safely without anæsthesia. The method suggested as very simple and ready in its application is that of measuring the injured extremity, and especially the distance between the acromion and the point of the epicondyle. In every case of fracture of the neck of the humerus this distance is shorter on the injured than on the sound side, and this shortening is greatest in those cases which most resemble subcoracoid dislocation of the head of the bone. In this latter injury the distance between the above-mentioned anatomical points is increased. The author does not agree with Malgaigne, who held that this increase in the length of the arm is not constantly met with in cases of dislocation. There is no difference of opinion, however, as to shortening of the arm in every case of fracture of the neck of the humerus with displacement of the shaft inwards. Shortening, which in this injury is usually considerable, is, as was acknowledged by Malgaigne, never met with in cases of dislocation. The author, when measuring the distance between the acromion and the external epicondyle, takes care that the arm is abducted, and the forearm flexed at a right angle. The round extremity, when measured, is placed in a similar position. The tape is then carried to the external condyle from the same point of the acromion on each side, and from either its anterior or its posterior angle.—*London Medical Record*, Nov. 15, 1876.

46. *Excision of the Elbow joint.*—Surgeon-Major J. H. Porter, Assistant Professor of Military Surgery, Army Medical School, Netley, makes (*Dublin Journ. Med. Sci.*, Oct. 1876) some interesting remarks on this operation, and relates two cases in which he has performed it, in one for gelatinous disease of the joint with caries of all the bones, in the other for pulpy disease of the joint

and extensive caries of the humerus and ulna. In both cases about two inches of bone were removed.

He states that "in investigating the experience of others, I was much impressed with the importance of the observations made by Mr. R. Hodges, of America, and Mr. C. T. Maunder, of London, respecting the method of operation to secure extension of the forearm. The former remarks that, in excision of the elbow, no transverse cut across the triceps should be made, and the latter (*vide British Medical Journal* of July, 1871) that it is essential to securing extension of the forearm, which power is not unfrequently lost, and for which he says the operation is responsible to preserve those tendinous fibres of the triceps muscle which are sent from beyond the attachment to the olecranon to blend with the fascia of the forearm, and especially with that portion of the fascia overlaying the anconeus muscle. Mr. Maunder commences the operation by a longitudinal incision at the back of the limb, in length three or four fingers' breadth both above and below, and crossing the point of the olecranon. He next sinks the knife deep into the triceps muscle, and divides it also longitudinally into two portions, the inner one of which is the more firmly attached to the ulna, while the outer portion is continuous with the anconeus muscle, and sends some tendinous fibres to blend with the fascia of the forearm. It is these latter that are to be scrupulously preserved."

To these suggestions of Drs. Hodges and Maunder, Surgeon Porter paid strict attention in his two cases, and "with the happy result of obtaining most perfect power of extension." "It is scarcely necessary," he adds, "to observe that with anchylosis in the straight position, there may also be power of extension; but as that result is not the only one desirable, it is necessary to try and induce the power of flexion so as to produce a generally useful limb, such as one possessing the natural motions of the shoulder, wrist, forearm, hand, and fingers. To obtain these results but little has been said by authorities, except as regards the movements of the elbow, and on these points opinions differ as to the period at which motion should commence. This, of course, might be influenced by the condition of the patient and the state of the wound.

"In the two following cases the limbs were first simply laid in an extended position on a firm pillow, and the wound dressed with lint saturated with carbolized oil, and cold applications to the outside. In both cases slight movement of the fingers was commenced the day after operation; about the fifth day supination and pronation of the forearm, and as soon as the inflammation consequent on the operation had subsided, flexion of the elbow, with slight extension, to prevent the ends of the bones coming into contact.

"When the patients were strong enough to sit up and go about, exercises were enforced with a weight suspended to a cord passed over a pulley, which brought into action all the muscles and joints of the affected limb.

"The electric induction current was also used with decided advantage."

In the first case five months after the operation the patient could "perform the following motions—scrub and sweep the floor, lift a considerable weight, place his hand behind his back so as to button his trousers, supinate or pronate the hand, extend the forearm, brush his hair and feed himself with a fork. The motions of the shoulder-joint were perfect, as well as that of the wrist, hand, and fingers. The sensation in the limb was similar to that in the sound one, and he possessed in every respect a useful arm, which would enable him to earn a livelihood."

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47. *Subcutaneous Division of the Neck of the Femur for Anchylosis of the Hip-joint.*—Mr. Wm. Adams, in a paper read before the Royal Med. and Chirurg. Society, Oct. 10, 1876, stated that during the six and a half years which have elapsed since his first performance of this operation, he has collected from published and unpublished sources the details of twenty-two cases in which the operation has been performed, including five operated upon by himself. In the table accompanying the paper it is shown that the operation was successful in twenty out of twenty-two cases, death from pyæmia resulting in one case, and death accelerated by chronic suppuration following the operation in another case, that of a girl, aged eighteen years, who succumbed with symptoms of

kidney disease and tubercular deposit in the lungs. Such a result bears good testimony to the general safety of the operation the dangers of which may be greatly diminished by the judgment of the surgeon in selecting his cases, and the skill shown in the performance of the operation. In cases where there is a doubt as to the possibility of the neck of the femur being divided subcutaneously in consequence of alterations which may have taken place at the articulation, it should not be attempted, but some other operation below the joint, such as that first proposed and successfully performed by Mr. Gant, should be adopted. In two cases of anchylosis of the hip-joint, with malposition of the limb, Mr. Gant divided the shaft of the femur subcutaneously, just below the small trochanter, using instruments similar to those employed by Mr. Adams. This operation may be performed without difficulty or risk of hæmorrhage. Mr. Adams has twice divided with the subcutaneous saw the shaft of the femur for great deformity resulting from badly united fractures, and once the shaft of the humerus for straight anchylosis. No suppuration whatever occurred. Mr. Maunder has also operated in similar cases by dividing the shaft of the femur below the small trochanter, using the chisel and mallet instead of the saw—an operation resembling those performed by Langenbeck, Mayer, Pancoast, Brainard, C. S. Little, and others. The general result of the operation in the twenty-two recorded cases has been to correct the deformity and to obtain bony anchylosis, with the leg in a straight position. In several cases useful motion has been obtained, especially by Mr. Jessop of Leeds, Mr. Lund of Manchester, and Dr. Sands of New York. The paper concluded with the interesting fact that Sir C. Bell, in 1828, had proposed division with a small saw of the neck of the femur in the early stages of hip disease with a view to allow the head of the bone to remain at rest in the acetabulum, and the hope that a freely movable false joint would result at the seat of the operation. Bell pointed out that such an operation would be attended by small risk, and, although he never carried out his suggestion, it was interesting to note that it was brought forward three years before Stromeyer's operation of subcutaneous tenotomy. Mr. HOLMES remarked that he had only performed the operation in a single case, which proved fatal, and in which, owing to the condition of the parts, the division of the neck of the femur was not subcutaneous. In many cases where anchylosis follows upon strumous disease it is impossible to make a subcutaneous section owing to the shortening of the neck of the thigh-bone, and the large amount of osseous deposits, fibrous thickening, and adhesions in the vicinity; and he expressed his regret that Mr. Adams had not stated the grounds upon which a selection of fit cases was based. The field of operation would be much narrowed if it were only resorted to where the joint was free from the parts around, as by such restriction the great majority of examples of anchylosis with great deformity would be excluded.

Mr. MAUNDER said that probably no example in modern operative surgery could be found associated with such great success and apparently with so little risk to life, as subcutaneous osteotomy. Mr. Adams had formerly pointed out the pathological conditions to which section of the neck of the bone was applicable, but not those to which it was inapplicable. It was in consequence of failure of section of the neck of the thigh-bone associated with tenotomy and forcible attempts at extension, in a case of fibrous anchylosis following strumous hip-joint disease operated upon by himself, and failure a week subsequently in another instance by Mr. W. Adams, which led him (Mr. Maunder) to resort to division of the femur below the lesser trochanter with a view to remedy the deformity. This he had accomplished several times with chisel and mallet. In two instances slight suppuration occurred for reasons explained in his paper on the subject at the Clinical Society. In the remaining five cases (one of division to remedy deformity from faulty union after fracture) primary union occurred without the least suppuration. Mr. Maunder urged the necessity of the operator avoiding penetration of cicatricial tissue, owing to the readiness with which this new-formed material ulcerates. This he believed to have occurred in three cases known to him. He expressed surprise that, such decided success having attended the use of the chisel, Mr. Adams should speak of it as less subcutaneous than when the saw was used. Mr. Adams had himself performed the operation five times, and in one of these cases with an unfavourable result. It was even a question yet to be determined whether the chisel would not replace the saw.

Mr. Adams, in reply, admitted that the selection of proper cases was most important, and to this subject he had paid much attention in his pamphlet on subcutaneous osteotomy. The classes of cases in which the operation could be performed were—1st, the rheumatic, where anchylosis had followed acute rheumatism, as in the first case upon which he had operated; 2d, the pyæmic, where anchylosis ensued upon pyæmic abscess; and, 3d, those only of a doubtfully strumous nature, in which the disease had been arrested in the first stage. In other cases, where the head of the femur was extensively destroyed, and change had taken place in the neck, Mr. Gant's operation might be performed. But, wherever practicable, the neck should be divided, as there was more chance of producing a false joint there than there was in the shaft. Since his paper was written Mr. Maunder had improved his operation by using one chisel instead of three, and there was no doubt that this great success was partly due to Mr. Maunder's skill as an operator. He thought the operation applicable to cases of fibrous anchylosis which resisted other modes of treatment; as evidence of the operation being one well established in surgery, he pointed to the fact that the twenty-two cases related in his paper occurred in the practice of no fewer than twelve different surgeons.—*Lancet*, Oct. 14, 1876.

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48. *Separation of the Spine of the Tibia.*—There is a fracture of the tibia, seldom or never described in surgical text-books, which is not without interest, and very possibly is more common than is generally supposed. A case presented itself to Professor Dittel, of Vienna, not long ago: An energetic landlord was ejecting one of his customers, whose legs "crossed themselves backwards," when some one who was helping the host gave the unfortunate man a kick either in the calf or the ham, producing altogether a complicated and not very intelligible accident. Blood was effused into the joint; amputation followed puncture; and at an autopsy it was found that the anterior crucial ligament had detached itself from its lower origin, tearing with it an oval piece of the upper surface of the tibia. This case led Dittel to perform a number of experiments on the cadaver (*Centralblatt für Chirurgie*, No. 29), in the way of forcible flexion, extension and rotation of the knee; but he seems to have failed in any case to obtain the exact result which occurred in this and the two following cases. In extreme extension the tibia gave way, either as the result of impaction of the condyles of the femur into it or by separation of the epiphysis; and if rupture inside the joint occurred at all, the posterior ligament carried away its lower attachment. In over-flexion, on the other hand, it was the anterior ligament which gave way, but it invariably remained attached to the tibia, and carried away part of its insertion into the femur. A number of other experiments of the same sort were performed, with various results. In No. 38 of the *Centralblatt für Chirurgie* is the record of a case described by Poncet in the *Bulletin de la Société de Chirurgie*, 1875, in which death occurred from fracture, produced by falling down three stories. Afterwards, when operations were being practised on the dead subject, it was that the left knee-joint was filled with blood, of which no trace was visible externally, while the whole spine of the tibia had been torn off by the separation of the lower attachment of the anterior crucial ligament. A case almost identical occurred in the wards of University College Hospital in April, 1873, and we believe the specimen is now in the museum there. It differed, however, in the fact that the patient was a boy of eleven years, instead of being, as in the other two cases, of adult age. A cart-wheel passed over some part of his leg, producing such extensive destruction of soft parts that, in spite of attempts to save it, it was found necessary to amputate a fortnight after his admission. No special complaint of the knee was made, nor was there anything externally to point to an injury; but after the removal of the limb a condition precisely similar to that described by Poncet was discovered, but in this case the blood had been absorbed, and its previous existence was shown only by the yellow staining of the cartilage. One point may be added, which, if the close proximity of the

attachments of the external semilunar cartilage and the anterior crucial ligament be borne in mind, must almost certainly have occurred in the other two cases, viz., that the external semilunar cartilage went up with the anterior crucial ligament and the separated spine of the tibia, and thus remained adherent to the femur, while the internal, of course, kept its place on the surface of the tibia.—*Med. Times and Gaz.*, Sept. 30, 1876.

49. *Suture of the Sciatic Nerve.*—In the preceding number of this Journal (p. 586), there was noticed a case of this, and it is stated (*Lancet*, Oct. 21st) that the same operation has since been performed by LANGENBECK, and the details are given in a letter from Dr. Du Pré to the *Journal de Médecine* of Brussels. The sciatic nerve had been divided two years before by a fall upon a knife. The limb was wasted, and the outer part of the foot and leg was anæsthetic. A longitudinal incision was made over the cicatrix, and the two ends of the divided nerve were found two inches apart and surrounded by a considerable quantity of cicatricial tissue. Each extremity was considerably enlarged, the upper more than the lower. A small portion of the lower extremity was removed and examined for nerve-fibres, to ascertain whether its degeneration was so great as to preclude hope of recovery. Finding that it contained nerve-fibres, the extremity of the central portion was removed, and, the knee being bent, the extremities were brought together and united by two ligatures of catgut, the wound closed, and the knee kept in the same position. The interference with the nerve was followed by no bad symptom, and two months afterwards, although there was no return of motor power, it was thought that sensation had improved, for the patient could indicate the place touched, where before there had been no sensitiveness.

OPHTHALMOLOGY.

50. *Modified Operation for Cataract.*—M. GALEZOWSKI, at the recent meeting of the French Association for the Advancement of Science, described an operation for cataract, which he had devised. At the present time, he said, "every surgeon endeavours to modify Graefe's operation, which is at present almost abandoned." He described the modications he had adopted; he does not make the sclerotic puncture and counter puncture, but restricts the incision to the limits of the cornea; he abandons the linear method, and substitutes for it an incision at the lower portion of the cornea, making a small flap. He also excises the lower portion of the iris, though the deformity of the pupil is then more observable, but this he thinks will be but a slight inconvenience to those who desire one thing, the restoration of sight. M. G. attributes to this inferior excision, the great success he has obtained, which is at present 100 per cent. Of 67 operations performed in the city, he has not failed in a single instance. By his method after the first steps of the operation the eye is free in its motions especially after the removal of the lens, and to this M. G. attributes the rarity of the loss of the vitreous. Another modification, which he considers not less important, consists in the abandonment of the use of the cystitome for the division of the capsule, and effecting this with Graefe's knife. As soon as the puncture is made the point of the knife is directed to the lens and the capsule may be divided easily; after the counter puncture is effected the flap is made. Latterly, instead of excising the iris he has made a simple incision of the sphincter pupillæ with very satisfactory results, but he has not determined to adopt this definitely. The statistics given to show the value of his method were as follows: Of 385 operations, 67 were performed in private practice, of which last all were successful. Of 322 operated on at his clinic, 288 were successful.—*Revue Scientifique*, August 26, 1876.